General

Guideline Title

Clinical practice guideline on management of older patients with chronic kidney disease stage 3b or higher (eGFR <45 mL/min/1.73 m^2).

Bibliographic Source(s)

Farrington K, Covic A, Aucella F, Clyne N, de Vos L, Findlay A, Fouque D, Grodzicki T, Iyasere O, Jager KJ, Joosten H, Macias JF, Mooney A, Nitsch D, Stryckers M, Taal M, Tattersall J, Van Asselt D, Van den Noortgate N, Nistor I, Van Biesen W, ERBP Guideline Development Group. Clinical practice guideline on management of older patients with chronic kidney disease stage 3b or higher (eGFR <45 mL/min/1.73 m2). Nephrol Dial Transplant. 2016 Nov;31(suppl 2):ii1-ii66. [189 references] PubMed

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Recommendations

Major Recommendations

The grade for the overall quality of evidence supporting the recommendations (A–D) and the implications of the recommendations (1, 2) are defined at the end of the "Major Recommendations" field.

Note from the National Guideline Clearinghouse: The European Renal Best Practice (ERBP) also provided additional advice for clinical practice. This advice is not graded, elaborates on one or more statements and is intended only to facilitate practical implementation.

General Approach to Older Patients with Advanced Chronic Kidney Disease (CKD) (Estimated Glomerular Filtration Rate [eGFR] <45 mL/min/1.73 m^2)

Q1. What parameter should be used in older patients (a) to estimate kidney function and (b) for dose adaptation purposes?

> The Guideline Development Group (GDG) recommends using estimating equations that correct for differences in creatinine generation rather than plain serum creatinine measurements to assess kidney function in older patients (1A).
> The GDG recommends that there is insufficient evidence to prefer one estimating equation over

another since all perform equally and substantial misclassification can occur with any of these equations when used in older patients with differing body composition (1B).
The GDG recommends formal measurement of kidney function if more accurate and precise estimation of GFR is required (1B). The GDG suggests the use of Chronic Kidney Disease Epidemiology Collaboration creatinine-cystatin (CKD-EPI$_{Cr\text{-}Cyst}$) may be an acceptable alternative (2C).
The GDG recommends taking account of kidney function when prescribing drugs whose active forms or metabolites are renally cleared (1A).
The GDG suggests that for drugs with a narrow toxic/therapeutic range, regular measurement of serum concentrations can provide useful information. Differences in protein binding in relation to uremia may necessitate use of different target levels of total drug concentration (2C).

Q2. What is the most reliable risk model score to predict progression of CKD in older patients with advanced CKD (eGFR <45 mL/min/1.73 m^2)?

The GDG recommends that the 4-variable Kidney Failure Risk Equation (KFRE) performs sufficiently well for use in older patients with advanced CKD and eGFR <45 mL/min/1.73 m^2 (1B).

Q3: What is the most reliable risk prediction model to predict mortality in older and/or frail patients with advanced CKD (eGFR <45 mL/min/1.73 m^2)?

The GDG suggests using the Bansal score to predict individual 5-year risk of death before end-stage kidney disease (ESKD) in non-frail older patients with CKD stage 3–5 (2B).
The GDG suggests that in patients at low risk in the Bansal score, a score including the assessment of frailty as stated in question 4a be performed (2B).
The GDG suggests that the Renal Epidemiology and Information Network (REIN) score be used to predict the risk for mortality in older patients with CKD stage 5 (2B).

Q4a: What is the best alternative method to assess functional decline in older and/or frail patients with advanced CKD?

The GDG recommends a simple score be used on a regular basis to assess functional status in older patients with CKD stage 3b–5d with the intention to identify those who would benefit from a more in-depth geriatric assessment and rehabilitation (1C).
The GDG recommends most simple scores, including self-report scales and field tests (sit-to-stand [STS], gait speed or 6-min walk test) have comparable and sufficient discriminating power to identify patients with decreased functional status (1C).

Q4b: Are interventions aimed at increasing functional status in older patients with renal failure (eGFR <45 mL/min/ 1.73 m^2 or on dialysis) of benefit?

The GDG recommends that exercise has a positive impact on the functional status of older patients with CKD stage 3b or higher (1C).
The GDG suggests that exercise training be offered in a structured and individualized manner to avoid adverse events (2C).

Q5a: Which is the best alternative to evaluate nutritional status in older patients with advanced CKD 3b or higher (eGFR <45 mL/min/1.73 m^2) or on dialysis?

The GDG recommends the subjective global assessment (SGA) as the gold standard to assess nutritional status of older patients with CKD stage 3b or higher (eGFR < 45mL/min/1.73m^2) (1C).
The GDG suggests that in older patients on hemodialysis (HD), a score including serum albumin, body mass index (BMI), serum creatinine/body surface area (BSA) and normalized protein nitrogen appearance [nPNA]) may be used to assess nutritional status (2D).

Q5b: Which interventions are effective in improving nutritional status in older/frail patients with advanced

CKD (eGFR <45 mL/min/1.73 m^2) or on dialysis?

The GDG suggests a trial of structured dietary advice and support with the aim of improving nutritional status (2C).

Q6: What is the benefit of dialysis in frail and older patients?

The GDG recommends the use of validated tools as explained in Q2 and Q3 to project likely outcomes and help decide the appropriateness of discussing options for renal replacement therapy (RRT) (see Figure 2 in the original guideline document).
The GDG recommends that the option for conservative management (CM) be discussed during the shared decision-making process on different management options for ESKD (1D).
The GDG recommends that the REIN score can be useful to stratify mortality risk of patients intending to start RRT (1C).

Definitions

Grade for the Overall Quality of Evidence

Grade	Quality Level	Description
A	High	The authors are confident that the true effects lie close to those of the estimates of the effect.
B	Moderate	The true effects are likely to be close to the estimates of the effects, but there is a possibility that they are substantially different.
C	Low	The true effects might be substantially different from the estimates of effects.
D	Very Low	The estimates are very uncertain and will often be far from the truth.

Note: Adapted from Guyatt GH, Oxman AD, Vist GE et al. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. BMJ 2008;336:924-6.

Implications of Strong and Weak Recommendations for Stakeholders

Grade	Implications		
	Patients	Clinicians	Policy
1: Strong, "The GDG recommends"	Most people in your situation would want the recommended course of action, only a small proportion would not.	Most patients should receive the recommended course of action.	The recommendation can be adopted as a policy in most situations.
2: Weak, "The GDG suggests"	Most people in your situation would want the recommended course of action, but many would not.	You should recognize that different choices will be appropriate for different patients. You must help each patient to arrive at a management decision consistent with her or his values and preferences.	Policy-making will require substantial debate and involvement of many stakeholders.

GDG = Guideline Development Group

Note: Adapted from Guyatt GH, Oxman AD, Vist GE et al. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. BMJ 2008;336:924-6.

The additional category 'ungraded' was used, typically to provide guidance based on common sense rather than on a systematic literature search. Where applicable, these statements were provided as 'advice for clinical practice'. Typical examples include recommendations regarding monitoring intervals, counseling and referral to other clinical specialists. The ungraded recommendations are generally written as simple declarative statements, but are not meant to be interpreted as being stronger recommendations than level 1 or 2 recommendations.

Clinical Algorithm(s)

An algorithm titled "Decision flow chart when managing older patients with CKD stage 3b (eGFR <45mL/min/1.73 m^2)" is provided in the original guideline document.

Scope

Disease/Condition(s)

Chronic kidney disease (CKD) stage 3b or higher (estimated glomerular filtration rate [eGFR] <45 mL/min)

Guideline Category

Evaluation

Management

Risk Assessment

Treatment

Clinical Specialty

Family Practice

Geriatrics

Internal Medicine

Nephrology

Intended Users

Advanced Practice Nurses

Dietitians

Health Care Providers

Physician Assistants

Physicians

Guideline Objective(s)

- To provide an evidence-based rationale for the day-to-day management of older (>65 years of age) patients with chronic kidney disease (CKD) stage 3b or higher (estimated glomerular filtration rate [eGFR] <45 mL/min/1.73 m^2) and to develop pathways of care by systematically compiling available evidence in this area
- To inform all involved stakeholders and to stimulate shared decision-making

Target Population

Older patients (>65 years of age) with chronic kidney disease (CKD) stage 3b or higher (estimated glomerular filtration rate [eGFR] <45 mL/min/1.73 m^2), as defined by the recent Kidney Disease: Improving Global Outcomes (KDIGO) classification

Interventions and Practices Considered

1. Assessment of kidney function
    - Use of estimating equations
    - Formal measurement of kidney function if more accurate and precise estimation of glomerular filtration rate (GFR) is required (i.e., Chronic Kidney Disease Epidemiology Collaboration creatinine-cystatin, [CKD-$EPI_{Cr\text{-}Cyst}$])
    - Taking account of kidney function when prescribing drugs
    - Regular measurement of serum concentrations when dosing medications
2. Use of risk model score to predict progression of chronic kidney disease (CKD) (4-variable Kidney Failure Risk Equation [KFRE])
3. Use of risk prediction model to predict mortality
    - Bansal score
    - Renal Epidemiology and Information Network (REIN) score
4. Assessment of functional decline (simple scores, including self-report scales and field tests [e.g., sit-to-stand (STS), gait speed or 6-min walk test])
5. Exercise training
6. Assessment of nutritional status
    - Subjective global assessment (SGA)
    - Hemodialysis (HD)
    - Serum albumin
    - Body mass index (BMI)
    - Serum creatinine/body surface area (BSA)
    - Normalized protein nitrogen appearance (nPNA)
7. Provision of structured dietary advice
8. Determination of appropriateness of dialysis (renal replacement therapy [RRT], conservative management [CM])
    - Use of validated tools (e.g., 4-variable KFRE, Bansal score, REIN score)
    - Shared decision making

Major Outcomes Considered

See Table 1 in the original guideline document for critically important outcomes, highly important outcomes, moderately important (surrogate) outcomes, and question-specific outcomes.

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Development of Clinical Questions

Systematic Reviews

With the final guideline scope as point of departure, the Guideline Development Group (GDG) identified specific research questions, for which a systematic review would be conducted. All questions addressed issues related to one of the following six areas:

- Estimation of glomerular filtration rate (GFR) for classification and dose adaptation
- Prognosticating rate of progression to end-stage renal disease
- Prognosticating risk of death in medium term periods
- Assessment of functional status and strategies to improve it
- Assessment of nutritional status and strategies to improve it
- Appraisal of benefits and drawbacks of renal replacement therapy (RRT) versus conservative care

For additional details regarding the six areas, refer to the original guideline document.

Pro-Con Debates

Besides these six predefined areas where a systematic review of the evidence was proposed, there also emerged different clinical questions where it was considered unlikely that a systematic review could provide substantial guidance. For these areas, it was decided to use a narrative approach to list arguments pro or con a certain management strategy in older (>65 years) patients with chronic kidney disease (CKD) stage 3b or higher. Within these pro–con debates, the GDG intended to cover the following areas:

- Glycemic control in frail older patients with advanced kidney disease
- Hypertension control in frail older patients with advanced kidney disease
- Kt/V as an adequacy parameter in frail older patients
- Use of alternative dialysis regimens (prolonged slow dialysis, daily dialysis, nocturnal dialysis) in frail older patients
- Hemodialysis (HD) versus peritoneal dialysis (PD) and home versus center-based
- Criteria for and appropriateness of transplantation in older patients with end-stage renal failure

For additional details regarding the point of debate for the six areas, refer to the original guideline document.

Development of Review Questions

The methods support team assisted in developing review questions, i.e., framing the clinical questions into a searchable format. This required detailed specification of the patient group (P), the intervention (I), the comparator (C) and the outcomes (O) for intervention questions and the patient group, index tests, reference standard and target condition for questions of diagnostic test accuracy. For each question, the guideline development group agreed upon explicit review question criteria including study design features. (See Appendix 2 in the original guideline document for detailed review questions and PICO tables.)

Searching for Evidence

Sources

The European Renal Best Practice (ERBP) methods support team searched The Cochrane Database of Systematic Reviews (May 2016), The Database of Abstracts of Reviews of Effects (DARE) (May 2016), The Cochrane Central Register of Controlled Trials (CENTRAL) (May 2016) and Medline (1946 to May, week 4, 2016) for all questions. The search strategies combined subject headings and text words for the patient population, index test and target condition for the diagnostic questions and subject headings and text words for the population and intervention for the intervention questions. The detailed search strategies are available in Appendix 3 of the original guideline document.

Reference lists from included publications were screened to identify additional papers. The methods support team also searched guideline databases and organizations including the National Guideline Clearinghouse, Guidelines International Network, Guidelines Finder, Centre for Reviews and Dissemination, National Institute for Health and Care Excellence, and professional societies of Nephrology and Geriatric medicine for guidelines to screen the reference lists.

Selection

For diagnostic questions, the GDG included all studies that compared any of the predefined clinical or biochemical tests with a gold standard reference test. For intervention questions, the GDG included all studies in which one of the predefined interventions was evaluated in humans. The GDG excluded case series that reported on benefit if the number of participants was five or less, but included even individual case reports if they reported an adverse event. No restriction was made based on language.

The GDG used the Early Reference Organisation Software (EROS) (http://www.eros-systematic-review.org) to organize the initial step of screening and selection of papers. The title and abstract of all papers retrieved by the original search were made available through this system to those responsible for screening. For each question, a member of the European Renal Best Practice (ERBP) methods support team and one member of the GDG dedicated to this question independently screened all titles and abstracts and discarded any that were clearly irrelevant and those that did not meet the inclusion criteria. Any discrepancies at this stage were resolved by consensus.

In a second round, full texts of potentially relevant studies were retrieved and independently examined for eligibility and final inclusion in the data extraction step. Any discrepancies were resolved by consensus. If no consensus could be reached, the disagreement was settled by group arbitration.

The flow of the paper selection is presented for each question in Appendix 4 of the original guideline document.

Number of Source Documents

See Appendix 4 in the original guideline document for study selection flow charts.

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Grade for the Overall Quality of Evidence

Grade	Quality Level	Description
A	High	The authors are confident that the true effects lie close to those of the estimates of the effect.
B	Moderate	The true effects are likely to be close to the estimates of the effects, but there is a possibility that they are substantially different.
C	Low	The true effects might be substantially different from the estimates of effects.
D	Very Low	The estimates are very uncertain and will often be far from the truth.

Note: Adapted from Guyatt GH, Oxman AD, Vist GE et al. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. BMJ 2008;336:924-6.

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Data Extraction and Critical Appraisal of Individual Studies

For each included study, the Guideline Development Group (GDG) collected relevant information on design, conduct and relevant results through a tailor-made Excel table. For each question, two reviewers independently extracted all data. The GDG produced tables displaying the data extraction of both reviewers. Any discrepancies were resolved by consensus and if no consensus could be reached, disagreements were resolved by an independent referee. From these data extraction tables, the GDG produced merged consensus evidence tables for informing the recommendations. The evidence tables are available in Appendix 5 of the original guideline document.

Risk of bias of the included studies was evaluated using validated checklists, as recommended by the Cochrane Collaboration. These were AMSTAR for systematic reviews, the Cochrane Risk of Bias tool for randomized controlled trials (RCTs), the Newcastle Ottawa scale for cohort and case–control studies and QUADAS for diagnostic test accuracy studies. Data were compiled centrally by the European Renal Best Practice (ERBP) methods support team.

Evidence Profiles

For research questions regarding therapeutic interventions, the methods support team constructed evidence profiles using the 'Grading of Recommendations Assessment, Development and Evaluation (GRADE) toolbox' developed by the international GRADE working group (http://www.gradeworkinggroup.org/). The evidence profiles include details of the quality assessment as well as summary—pooled or unpooled—outcome data, an absolute measure of intervention effect when appropriate and the summary of quality of evidence for each outcome. Evidence profiles were reviewed and approved with the rest of the guideline development group. Evidence profiles were constructed only for research questions addressed by at least two RCTs. If the body of evidence for a particular comparison of interest consisted of only one RCT or of solely observational data, the summary tables provided the final level of synthesis.

Rating the Quality of the Evidence for Each Outcome across Studies

The GDG rated the overall quality of the evidence for each intervention separately addressing each outcome (see the "Rating Scheme for the Strength of the Evidence" field). In accordance with GRADE, the guideline development group initially categorized the quality of the evidence for each outcome as high if it originated predominantly from RCTs and as low if it originated from observational studies. The GDG subsequently downgraded the quality of the evidence one or two levels if results from individual studies were at high or very high risk of bias, there were serious inconsistencies in the results across studies, the evidence was indirect, the data were sparse or imprecise or publication bias was suspected. The quality of evidence arising from observational studies was upgraded if effect sizes were large, there was evidence of a dose–response gradient, or all plausible confounding would either reduce a demonstrated effect or suggest a spurious effect when results showed no effect (see Table 2 in the original guideline document). Uncontrolled case series and case reports automatically received downgrading from 'low' to 'very low' level of evidence for risk of bias, so that no other reasons for downgrading were marked.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Establishment of the Guideline Development Group

As defined by the guideline development methodology (see the "Availability of Companion Documents" field), the European Renal Best Practice (ERBP) advisory board installed a steering group, which, after selection of the topics based on the systematic scoping procedure, selected further members of the Guideline Development Group (GDG). Members of the steering group and of the GDG were selected based on their clinical and research expertise and their willingness to invest the necessary time and effort to perform the task according to the proposed deadlines and the agreed methodology. The GDG consisted of content experts, including individuals with expertise in clinical geriatric medicine, general internal medicine, nutrition and clinical nephrology. In addition, experts in epidemiology and systematic review methodology were added to the GDG. The ERBP methods support team provided methodological input and practical assistance throughout the process.

Formulating and Grading Statements

Statements

After the evidence tables and profiles had been prepared, revised and approved, the GDG formulated and graded the statements during a full-day plenary meeting.

Recommendations can be for or against a certain strategy. The GDG drafted the statements based on their interpretation of the available evidence. Individual statements were made and discussed in an attempt to reach group consensus. If the GDG could not reach consensus, it held a formal open vote by show of hands. An arbitrary 80% had to cast a positive vote for a statement to be accepted. Voting results and reasons for disagreement were specified in the rationale when applicable. In accordance with Grading of Recommendations Assessment, Development and Evaluation (GRADE), the GDG classified the strength of the statements as strong (coded 1) or weak (coded 2) (see the "Rating Scheme for the Strength of the Evidence" and "Rating Scheme for the Strength of the Recommendations" fields in this summary and Figure 1 in the original guideline document).

Judgments around four key factors determined the strength of a recommendation: the balance between desirable and undesirable consequences of alternative therapeutic or diagnostic strategies, the quality of the evidence, the variability in values and preferences. The GDG did not conduct formal decision or cost analysis.

Ungraded Statements

The GDG decided to use an additional category of ungraded statements for areas where formal evidence was not sought and statements were based on common sense, or expert experience alone. The ungraded statements were generally written as simple declarative statements but were not intended to be stronger than level 1 or 2 recommendations.

Writing the Rationale

The GDG collated recommendations and ungraded statements for each clinical question in separate chapters structured according to a specific format. Each question resulted in one or more specific boxed statements. All statements were accompanied by their GRADE classification as level 1 or 2 (strength of recommendations) and A, B, C or D (quality of the supporting evidence).

These statements are followed by advice for clinical practice where relevant and the rationale of the statement. The rationale contains a brief section on 'why this question' with relevant background and justification of the topic, followed by a short narrative review of the evidence in 'what did we find?' and finally a justification of how the evidence was translated in the recommendations made in 'did we translate the evidence into the statement'.

When areas of uncertainty were identified, the GDG considered making suggestions for future research based on the importance to patients or the population, and on ethical and technical feasibility.

Rating Scheme for the Strength of the Recommendations

Implications of Strong and Weak Recommendations for Stakeholders

Grade	Implications		
	Patients	Clinicians	Policy
1: Strong, "The GDG recommends"	Most people in your situation would want the recommended course of action, only a small proportion would not.	Most patients should receive the recommended course of action.	The recommendation can be adopted as a policy in most situations.
2: Weak, "The GDG suggests"	Most people in your situation would want the recommended course of action, but many would not.	You should recognize that different choices will be appropriate for different patients. You must help each patient to arrive at a management decision consistent with her or his values and preferences.	Policy-making will require substantial debate and involvement of many stakeholders.

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The additional category 'ungraded' was used, typically to provide guidance based on common sense rather than on a systematic literature search. Where applicable, these statements were provided as 'advice for clinical practice'. Typical examples include recommendations regarding monitoring intervals, counseling and referral to other clinical specialists. The ungraded recommendations are generally written as simple declarative statements, but are not meant to be interpreted as being stronger recommendations than level 1 or 2 recommendations.

Cost Analysis

The Guideline Development Group (GDG) did not conduct formal decision or cost analysis.

Method of Guideline Validation

Comparison with Guidelines from Other Groups

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

A draft version of the guideline was presented at the annual European Renal Association–European Dialysis and Transplant Association (ERA-EDTA) meeting in Vienna 2016. Attending participants could write down their comments and suggestions on the guideline through an electronic account.

Internal and External Review

Internal Review

A first draft of the guideline was sent to internal reviewers from the ERA-EDTA council and the European Renal Best Practice (ERBP) advisory board. Internal reviewers were asked to comment on the statements and the rationale within free text fields. All these comments and suggestions were discussed during an ERBP advisory board meeting, during a meeting of the ERBP methods support team and during an additional teleconference meeting of the guideline development group. For each comment or suggestion, the Guideline Development Group (GDG) evaluated if it was needed to adapt the statement, again taking

into account the balance between desirable and undesirable consequences of the alternative management strategies, the quality of the evidence and the variability in values and preferences.

External Review

All members of the ERA-EDTA had the option to provide comments through a Survey Monkey questionnaire.

All comments and suggestions were discussed with the GDG by e-mail, as well as during a final meeting of the co-chairs of the GDG, the methods support team and the chair of ERBP.

Comparison with Guidelines from Other Groups

Refer to the 'What do other guidelines state?' sections in the original guideline document for an assessment of recommendations from other groups, when available.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate management of older patients (>65 years of age) with chronic kidney disease (CKD) stage 3b or higher (estimated glomerular filtration rate [eGFR] <45 mL/min/1.73 m^2)

See the "Rationale" sections in the original guideline document for benefits of specific interventions.

Potential Harms

- Older people are often excluded from studies on which glomerular filtration rate (GFR) risk prediction scores are based. Hence it is unclear whether current risk prediction scores perform adequately in older people. The Kidney Failure Risk Equations (KFREs) developed by Tangri et al. performed well and have been well validated, though they require the application of a correction factor in non-North American populations.
- Estimating equations cannot be reliably used in patients with acute changes in kidney function.
- Undertaking dialysis affects quality of life, and providing some symptom relief comes at the cost of significant burdens for the patient, and their families and carers.

Qualifying Statements

Qualifying Statements

This clinical practice guideline was designed to assist shared decision-making on the management of older individuals (>65 years of age) with chronic kidney disease (CKD) stage 3b or higher (estimated

glomerular filtration rate [eGFR] <45 mL/min/ 1.73 m^2). It was not intended to define a standard of care and should not be construed as one. It should not be interpreted as prescribing an exclusive course of management.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Clinical Algorithm

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

End of Life Care

Living with Illness

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

Farrington K, Covic A, Aucella F, Clyne N, de Vos L, Findlay A, Fouque D, Grodzicki T, Iyasere O, Jager KJ, Joosten H, Macias JF, Mooney A, Nitsch D, Stryckers M, Taal M, Tattersall J, Van Asselt D, Van den Noortgate N, Nistor I, Van Biesen W, ERBP Guideline Development Group. Clinical practice guideline on management of older patients with chronic kidney disease stage 3b or higher (eGFR <45 mL/min/1.73 m2). Nephrol Dial Transplant. 2016 Nov;31(suppl 2):ii1-ii66. [189 references] PubMed

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2016 Nov

Guideline Developer(s)

European Renal Best Practice - Independent Expert Panel

Source(s) of Funding

The European Renal Best Practice (ERBP) sponsored the entire production of this guideline, according to the statutes of European Renal Association–European Dialysis and Transplant Association (ERA-EDTA) and the bylaws of ERBP. Activities of ERBP and its methods support team are supervised by an advisory board (see www.european-renal-best-practice.org for details and declaration of interests). ERBP is an independent part of ERA-EDTA. The council of ERA-EDTA approves and provides the annual budget based on a proposition made by the ERBP chair. ERA-EDTA receives money and is partly funded by industrial partners, but its council is not involved with and does not interfere with question development or any other part of the guideline development process. The Guideline Development Group (GDG) did not receive any funds directly from industry to produce this guideline.

Guideline Committee

Guideline Development Group

Composition of Group That Authored the Guideline

Guideline Development Group (GDG) Members: Filippo Aucella, Consultant nephrologist, Nephrology and Dialysis Unit at the Research Hospital 'Casa Sollievo della Sofferenza', San Giovanni Rotondo, Italy; Naomi Clyne, Consultant nephrologist, Skåne University Hospital, Lund, Sweden; Adrian Covic (*co-chair*), Consultant nephrologist, Clinic of Nephrology, C. I. Parhon University Hospital, Gr. T. Popa, University of Medicine and Pharmacy, Iasi, Romania; Leen DeVos Resident nephrologist, Department of Nephrology, Ghent University Hospital, Ghent, Belgium; Ken Farrington (*co-chair*) Consultant nephrologist, Renal Unit, Lister Hospital, Stevenage, UK; Andrew Findlay, Consultant nephrologist, Lister Hospital, Stevenage, UK; Denis Fouque, Consultant nephrologist, Division of Nephrology, Université de Lyon, UCBL, INSERM, Centre Hospitalier Lyon Sud, Pierre Benite, France; Tomasz Grodzicki Consultant geriatrician, Department of Internal Medicine and Geriatrics, University Hospital of Krakow, Krakow, Poland; Osasuyi Iyasere, Specialist registrar, Renal Unit, Leicester Royal Infirmary, Leicester, UK; Kitty J. Jager, Epidemiologist, director of the European Renal Association–European Dialysis and Transplant Association (ERA-EDTA) registry, Department of Medical Informatics, Amsterdam Medical Center, Amsterdam, The Netherlands; Hanneke Joosten, Consultant nephrologist and geriatrician, Department of Internal Medicine, Maastricht University Medical Centre, Maastricht, The Netherlands; Juan Florencio Macias, Consultant geriatrician Faculty of Medicine, University of Salamanca, Salamanca, Spain; Andrew Mooney, Consultant nephrologist, Renal Unit, St James's University Hospital, Leeds Teaching Hospitals NHS Trust, Leeds, UK; Dorothea Nitsch, London School of Hygiene and Tropical Medicine, London, UK, UCL Centre for Nephrology, Royal Free Hospital, University College London Medical School, London, UK; Marijke Stryckers, Resident nephrologist, Department of Nephrology, Ghent University Hospital, Ghent, Belgium; Maarten Taal, Consultant nephrologist, Department of Renal Medicine, Royal Derby Hospital, Derby, UK, Division of Medical Sciences and Graduate Entry Medicine, University of Nottingham, Nottingham, UK; James Tattersall, Consultant nephrologist, Leeds Teaching Hospitals Trust, Leeds, UK; Dieneke van Asselt, Consultant geriatrician, Department of Geriatric Medicine of the Radboud University Medical Center, Nijmegen, The Netherlands; Nele Van den Noortgate, Consultant geriatrician, Department of Geriatric Medicine, Ghent University Hospital, Ghent, Belgium

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Financial Disclosures/Conflicts of Interest

All participants in the Guideline Development Group (GDG) were required to complete a detailed 'Declaration of interest statement,' including all current and future conflicts of interest as well as past conflicts of interest restricted to the 2 years before joining the GDG. European Renal Best Practice (ERBP) felt that excluding all individuals with some degree of potential conflict of interest would make assembling a GDG impossible. Therefore, members of the GDG were allowed to have past financial and/or intellectual conflicts of interest. No consequences were attached to the stated interests, but the authors insisted on transparency. All members of the GDG were allowed to participate in discussions and had equal weight in formulation of the statements. All were allowed equal involvement in data extraction and writing the rationales.

The updated declaration of interest forms are available from http://www.european-renal-best-practice.org/content/guideline-development-group-management-older-patients-ckd and are updated on a regular basis.

None of the GDG members declared having a conflict of interest with the topic of the current guideline. The details of their declaration of interest at the moment of the guideline production can be found in Appendix 1 in the original guideline document.

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Guideline Availability

Available to subscribers from the Nephrology Dialysis Transplantation Journal Web site.

Availability of Companion Documents

The following is available:

Nagler EV, Webster AC, Bolignano D, Haller MC, Nistor I, van der Veer SN, Fouque D, Van Biesen W. European Renal Best Practice (ERBP) guideline development methodology: towards the best possible guidelines. Nephrol Dial Transplant 2014 Apr;29(4):731-8. Available from the Nephrology Dialysis Transplantation Journal Web site.

Patient Resources

None available

NGC Status

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